

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-20 (canceled).

21. (new): A radial slaving method for a device for reproducing information from an optical disc, in which the information stored on the disc in the form of alterations arranged along predetermined tracks of the disc is explored by a laser beam, which converges at a spot on the optical disc and results in a beam emerging from the said disc by reflection or transmission, the device being equipped with a multi-photodiode far-field detection system for detecting the emergent light beam, the method:

- combining read signals of the photodiodes of the detection system so as to form four read subsystems having two pairs of subsystems, the subsystems of each pair being arranged on either side of a first axis parallel to the image of the axis of the track being explored, and the pairs being arranged on either side of a second axis perpendicular to the first axis, the first and second axes being axes of symmetry for the detection system, wherein combining the read signals of the said photodiodes takes the difference between the read signals of two subsystems belonging to different pairs in order to form a read signal along a first diagonal of the detection system and a read signal along a second diagonal of the detection system; and
- phase-compares the signals obtained by each of the two subsystems in order to obtain a radial error signal substantially proportional of the radial tracking.

22. (new): The method according to Claim 21, in which the subsystems have photodiodes of a four-quadrant detector.

23. (new): The method according to Claim 22, wherein said step of phase-comparing the read signals along the said first and second diagonals performs a cross-correlation between each read signal of one diagonal and the signal of the other diagonal, to which a predetermined delay is assigned.

24. (new): The method according to Claim 23, wherein the predetermined delay is selected as a function of the maximum frequency of the read signals and the modulation depth of the optical disc.

25. (new): The method according to Claim 23, wherein the predetermined delay is selected to be less than the clock period of the information to be read.

26. (new): The method according to Claim 21, furthermore comprises a rapid pre-correction step, which dynamically adjusts the delays of the read signals along the first and second diagonals, in the channels for constructing the readout signal, as a function of the radial error signal.

27. (new): The method according to Claim 26, wherein said rapid pre-correction step:

- filters the radial error signal in order to keep only the high-frequency components of the signal;
- determines an inverse variation of the delays as a function of the high-frequency component values, in order to minimize the phase-shift effects of the readout signal.

28. (new): A device for reproducing information from an optical disc, in which the information stored on the disc in the form of alterations is arranged along predetermined tracks of the disc, the reproduction device comprising:

- a light source for providing an incident light beam;
- first optical means for making said beam converge at a spot on the optical disc;
- second optical means for splitting the beam emerging from said disc and resulting from reflection or transmission of the incident beam by the disc,
- a multi-photodiode detection system arranged in the far-field in the path of said emergent beam in order to detect said light beam,
- first combining means, which receive the individual read signals of said photodiodes in order to construct two read signals corresponding to two subsystems, the sensitivity functions of which in the plane of the disc make two symmetrical angles with the direction of the track being explored; and
- second phase comparison means for comparing the phases of said two read signals of the subsystems and providing a radial error signal.

29. (new): The reproduction device according to Claim 28, in which the multi-photodiode detection system has a four-quadrant detector having two pairs of photodiodes, the photodiodes of each pair being arranged on either side of a first axis parallel to the image of the axis of the track being explored, and said pairs being arranged on either side of a second axis perpendicular to said first axis, said first and second axes being axes of symmetry for said detection system, said reproduction device having said first combining means comprise two differential circuits, which respectively receive the signals of

two photodiodes belonging to the two respective diagonals of the said detection system and each provide the difference between the received signals as a read signal along a first and a second diagonal.

30. (new): The reproduction device according to Claim 29, wherein said second phase comparison means includes a circuit for cross-correlation of each diagonal read signal with the signal of the other diagonal, to which a predetermined delay is assigned.

31. (new): The reproduction device according to Claim 30, wherein said cross-correlation circuit comprises two processing channels, respectively processing the read signal along the first diagonal and the read signal along the second diagonal, each channel comprising:

- a band-pass filtering circuit which receives the corresponding read signal;
- a multiplier which receives the signal filtered by the said filtering circuit on one input;
- a delay circuit which receives said filtered signal and is connected to the other input of the multiplier of the other channel;

and in that the said cross-correlation circuit furthermore comprises:

- a differential circuit which takes the difference of the signal is provided by the two multipliers; and
- a low-pass filter connected to said differential circuit for providing the said radial error signal.

32. (new): The reproduction device according to Claim 29, furthermore including an adder circuit, which receives the signals of the said two differential circuits and provides a readout signal for the information stored on the disc.

33. (new): The reproduction device according to Claim 32, wherein in order to perform a rapid pre-correction of the read signals, the said reproduction device furthermore comprises:

- at the output of each of said differential circuits, a variable delay circuit which has a delay control input;
- an adjustment circuit connected to the control inputs of the variable delay circuits; and
- high-pass filtering means connected between the output of the second phase comparison means and said adjustment circuit, said adjustment circuit controlling the variable delay circuits in reverse as a function of the high-frequency part of said radial error signal.

34. (new): The method according to Claim 24, wherein said predetermined delay is selected to be less than the clock period of the information to be read.

35. (new): The reproduction device according to Claim 29, furthermore including an adder circuit, which receives the signals of said to differential circuits and provides a readout signal for the information stored on the disc.

36. (new): The reproduction device according to Claim 30, furthermore including an adder circuit, which receives the signals of said to differential circuits and provides a readout signal for the information stored on the disc.

37. (new): The reproduction device according to Claim 31, furthermore including an adder circuit, which receives the signals of the said to differential circuits and provides a readout signal for the information stored on the disc.